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Date of Signature and Deposit: January 12, 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: William F. Dove

Alexandra Shedlovsky

Date: January 12, 2001

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Title: METHOD FOR IDENTIFYING

MUTANTS AND MOLECULES

RESPONSE TO A REQUIREMENT FOR RESTRICTION

Commissioner For Patents Washington DC 20231

Dear Sir:

In response to an office action mailed September 12, 2000, please amend the application as follows.

Please amend Claims 6 and 7 and add new Claims 26-29 so that the pending claims read as follows:

1. A method for identifying a segregating mutation at a genetic locus that modifies an index phenotype in a non-human index inbred strain, the segregating mutation causing an outlying phenotype relative to the index phenotype, the method comprising the steps of:

outcrossing at least one male animal of a non-human founder inbred strain to at least one female animal of a non-human index inbred strain to obtain F_1 progeny, the founder inbred strain carrying random point mutations relative to a wild-type animal of the founder inbred strain, the index inbred strain carrying a congenic dominant allele at a locus known to confer the index phenotype and being genetically distinguishable from the founder inbred strain, wherein at least one of the F_1 progeny that carry the dominant allele also carry at least one random mutation;

backcrossing gametes from male F₁ progeny to at least one female of the index inbred strain, with or without the index allele, to obtain N2 backcross progeny, wherein at least one of the N2 backcross progeny that carry the dominant allele also exhibit the outlying phenotype; and

verifying that the outlying phenotype is caused by a segregating mutation.

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